

ago, and has been gradually extending its range ever since, until it is now easily first among the marine plants of the district.

The only part of Prince Edward Island where it has yet been found is the extreme southeast, in the neighborhood of Murray Harbor and Cape Bear. It was first collected there in April, by J. Harper Prowse, but although as abundant as elsewhere, it remains so for only a few miles, and then gradually disappears. A solitary drifted specimen, half buried in sand, was found at the Wood Islands, fifteen miles to the west, but it seems not to grow there, and may possibly have drifted from the opposite shores of Nova Scotia. The farmers near Cape Bear gather the seaweeds driven ashore into so-called kelp beds for use as fertilizer. *Laminaria* is however only an occasional constituent, this rockweed forming at least three fourths of the whole.

On the twelve miles of coast bounding Pictou Island it is nowhere wanting.

While it has been alleged to grow at two or three points on the Atlantic coast of Nova Scotia, every report definite enough to be investigated has been shown to be without foundation, and at present there is every reason to believe that it is confined to the warmer waters of the Gulf. There its profusion is remarkable in view of its total absence elsewhere. Its only rivals are two other rockweeds, *Fucus vesiculosus* and *Ascophyllum nodosum*, and it is not only a more showy plant than either of these, but in the number of individuals exceeds them together.

NEW YORK BOTANICAL GARDEN.

A KEY TO THE NORTH AMERICAN SPECIES OF GALERA

BY F. S. EARLE

KEY TO THE SECTIONS

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| 1. Universal veil none, or very fugacious. | 2. |
| Universal veil subsistent as fibrils on the margin and stipe. | ERIODERMAE. |
| 2. Pileus plicate-striate. | PLICATELLAE. |
| Pileus often striate but not plicate. | 3. |

3. Pileus somewhat fleshy, conic-campanulate, atomaceous when dry, even or striatulate; stipe strict; on dung, rotten wood, etc. CONOCEPHALAE.
Pileus membranaceous, campanulate, glabrous or subsericeous when dry; stipe thin, lax, flexile; among mosses. ERYOGENAE.

KEY TO THE SPECIES

Section CONOCEPHALAE

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| 1. Pileus white. | 2. |
| Pileus sordid flesh-color. | <i>G. fragilis</i> Pk. |
| Pileus pallid. | <i>G. macromastes</i> (Fr.) Sacc. |
| Pileus brownish or ochraceous. | 3. |
| 2. Stipe glabrous. | <i>G. alba</i> Pk. |
| Stipe pruinose. | <i>G. lateritia albicolor</i> Pk. |
| 3. Stipe white or whitish. | 4. |
| Stipe concolorous or subconcolorous. | 8. |
| 4. Pileus glabrous, striate. | 5. |
| Pileus viscid, even; stipe glabrous. | <i>G. angusticeps</i> Pk. |
| 5. Pileus yellowish to ochraceous; stipe pruinose. | 6. |
| Pileus chestnut; stipe striate-sulcate, silky. | <i>G. sulcatipes</i> Pk. |
| 6. Lamellae not crowded, much crisped and interveined. | <i>G. crispa</i> Longyear |
| Lamellae crowded, not crisped or interveined. | 7. |
| 7. Color of pileus variable; lamellae red-ferruginous. | <i>G. versicolor</i> Pk. |
| Color of pileus constant; lamellae fulvo-ferruginous. | <i>G. lateritia</i> (Fr.) Gillet |
| 8. Lamellae linear. | 9. |
| Lamellae broad, often ventricose. | 10. |
| 9. Stipe 15 cm., twisted. | <i>G. tortipes</i> (Mont.) Sacc. |
| Stipe 2-4 cm., not twisted. | <i>G. teneroides</i> Pk. |
| 10. Pileus 4-8 mm.; stipe filiform, 1 mm. thick or less. | 11. |
| Pileus 1-3 cm.; stipe more than 1 mm. thick. | 13. |
| 11. Lamellae free (possibly a <i>Pluteolus</i>) | <i>G. Martiana</i> (B. & C.) Sacc. |
| Lamellae adnate. | 12. |
| 12. Lamellae distant; pileus ferruginous. | <i>G. capillaripes</i> Pk. |
| Lamellae somewhat crowded; pileus dark cinereous to ochraceous. | <i>G. spartea</i> (Fr.) Gillet (?) |
| Lamellae crowded; pileus ochraceous. | <i>G. tenera minor</i> Pk. |
| 13. Pileus ferruginous. | 14. |
| Pileus ochraceous. | 16. |
| 14. Pileus corrugated; lamellae subdistant. | <i>G. inculta</i> Pk. |
| Pileus smooth; lamellae crowded. | 15. |
| 15. Spores 10-12 μ \times 6 μ ; pileus oval-campanulate. | <i>G. ovalis</i> (Fr.) Gillet |
| Spores 12-15 μ \times 6-10 μ ; pileus conic-campanulate. | <i>G. tenera obscurior</i> Pk. |
| 16. Pileus and stipe erect-pubescent when moist. | <i>G. tenera pilosella</i> (Pers.) Pk. |
| Pileus and stipe glabrous. | 17. |

17. Stipe cylindrical, base obtuse. *G. tenera* (Schaeff.) Gillet
 Stipe radicating strongly at base. *G. antipoda* (Lasch) Gillet
 Stipe conspicuously bulbous at base. *G. sphaerobasis* (Post) Karst.

Section BRYOGENAE

1. Stipe white or pallid. 2.
 Stipe ochraceous, ferruginous, or darker. 4.
2. Pileus rugose-reticulate. *G. reticulata* Pk. 3.
 Pileus smooth. 3.
3. Lamellae narrow; stipe silky-fibrillose, apex pruinose. *G. bryophila* Pk.
 Lamellae triangular; stipe glabrous. *G. aquatilis* (Fr.) Gillet
4. Pileus cinnamon or chestnut to ochraceous; stipe 10-15 cm. long. 5.
 Pileus watery-cinnamon; stipe 4-6 cm. \times 2 mm. *G. Bryorum* (Pers.) Sacc.
 Pileus ferruginous-orange; stipe 2-3 cm. long. 6.
5. Pileus watery-cinnamon; veil scarcely developed. *G. Sphagnorum* (Pers.) Gillet
 Pileus darker, often chestnut; veil strongly developed. *G. Sphagnorum velata* Pk.
6. Stipe blackish-brown. *G. Hypnorum nigripes* Pk. 7.
 Stipe concolorous. 7.
7. Pileus obtuse or subpapillate. *G. Hypnorum* (Batsch) Gillet
 Pileus strongly umbonate. *G. Hypnorum umbonata* Pk.

Section Plicatellae

1. Pileus reddish. *G. lirata* (B. & C.) Sacc.
 Pileus silvery-brown. *G. striatula* Clements
 Pileus yellow. 2.
 Pileus ochraceous or fuscous. 3.
2. Lamellae crowded, narrow. *G. flava* Pk.
 Lamellae distant, broad. *G. semilanceata* Pk.
3. Pileus viscid, pale sordid-fuscous. *G. crocospora* (B. & C.) Sacc.
 Pileus glabrous, yellow to ochraceous. ***G. plicatella*** (Pk.) *
 Pileus densely silky tomentose, ochraceous. *G. pulchra* Clements

Section Eriodermæ

1. Pileus reddish-tawny; stipe reddish-brown. *G. rufipes* Pk.
 (See also *Galera Sphagnorum velata* Pk. and *G. tenera pilosella* (Pers.) Pk.)

AN IMPROVISED HORIZONTAL MICROSCOPE

By H. M. RICHARDS

Horizontal microscopes, while very useful pieces of apparatus, may perhaps be regarded as one of the luxuries of a physiologist.

* *Agaricus coprinoides* Pk. Reg. Rept. 26: 59. 1874. Not Corda.

Agaricus plicatellus Pk. Reg. Rept. 29: 66. 1878.

Galera coprinoides Pk. Reg. Rept. 46: 69. 1893.